**PDB26**

## COSTS AND NEONATAL OUTCOMES AFTER INSULIN ASPART COMPARED WITH HUMAN INSULIN IN PREGNANT WOMEN WITH TYPE 1 DIABETES

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**OBJECTIVES:** Poor glycaemic control during pregnancy in women with type 1 diabetes is associated with high risk of pre-term delivery, neonatal mortality and morbidity. Improving control might improve outcomes and reduce the cost of managing pre-term infants. This study assessed costs and outcomes associated with insulin aspart (IAsp) and human insulin (HI) in pregnant women with type 1 diabetes. **METHODS:** Women with type 1 diabetes were enrolled if ≤10 weeks pregnant or planning to become pregnant, and had $HbA_{1C}$ ≤8% at confirmation of pregnancy. Subjects were randomised to treatment with IAsp or HI in a basal-bolus regimen with NPH insulin, with doses titrated to American Diabetes Association guidelines. The effectiveness endpoint in this analysis was the percentage of women with a live birth at term (≥37 weeks gestation). We considered costs of insulin and of inpatient care for pre-term infants. Length of stay in intensive care was estimated from gestational age. Costs were calculated from the perspective of the UK National Health Service. Non-parametric bootstrapping was used to generate confidence intervals. **RESULTS:** Of 417 women randomised, 322 became pregnant and effectiveness was evaluable for 302, 151 in each arm. Significantly more women experienced a live birth at term with IAsp (72.8%) than with HI (60.9%), difference 11.9% (95% CI 0.7%, 22.5%). Mean cost per woman was £3347 for HI, and £3359 for IAsp, difference £13 (95% CI –£612, £966). Insulin accounted for 9.7% of costs for IAsp and 5.6% for HI. The incremental cost-effectiveness ratio was £106 per additional live birth at term (95% CI dominant, £58076). **CONCLUSION:** IAsp was associated with a significantly higher proportion of live births at term than HI. The cost of managing pre-term births was large compared to the cost of insulin administered.

**PDB27**

## COST-EFFECTIVENESS OF BIPHASIC INSULIN ASPART 30 VERSUS HUMAN PREMIX INSULIN FOR TYPE 2 DIABETES PATIENTS IN CHINA

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**OBJECTIVES:** Type 2 diabetes patients treated with human premix insulin (with or without conventional oral antidiabetic agents) were converted to biphasic insulin aspart 30 (BIAsp 30) in PRESENT, a single-arm observational study conducted in China (n = 2289). Patients showed a reduction in HbA1c of 1.82% points and reduced rates of hypoglycemic events (1576 to 476 per 100 patient years) three months after therapy conversion. **METHODS:** A published and validated computer simulation model of diabetes (CORE Diabetes Model) was used to project short-term results obtained from PRESENT to estimate long-term clinical and cost outcomes for patients switching from human premix insulin to BIAsp 30 in a Chinese setting. Chinese patient characteristics and mortality were derived from published sources and primary research was performed to estimate costs of treating complications and management practices in a Chinese setting. Probabilities of complications were derived from landmark clinical and epidemiological studies. Total direct costs (complications + treatment costs) were projected over patient lifetimes for BIAsp 30 and current standard practice (baseline values). Future costs and clinical benefits were discounted at 3% annually. **RESULTS:** Short-term therapy benefits associated with BIAsp 30 versus human premix (improvement in HbA1c levels and a decrease in hypoglycemic events) were projected to increase life expectancy by 0.632 years and improve quality-adjusted life expectancy by 1.022 quality-adjusted life years (QALYs) (7.664 ± 0.111 versus 6.641 ± 0.092 QALYs). BIAsp 30 reduced total direct costs by RMB 7,484 (RMB 230,926 ± 4,676 versus RMB 238,410 ± 4,970) due to decreasing the cost of treating diabetes-related complications (RMB 118,936 versus 147,449). **CONCLUSION:** The results indicated that BIAsp 30 is dominant (less cost with more health benefit) versus human premix in the treatment of type 2 diabetes patient in a Chinese setting, with lower direct costs and superior patient outcomes due to reductions in diabetic-related complications.

**PDB28**

## COST-EFFECTIVENESS ANALYSIS OF ACARBOSE IN THE PREVENTION OF TYPE 2 DIABETES IN SOUTH KOREA

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**OBJECTIVES:** The aim of this health economic study was to assess the cost-effectiveness of acarbose versus placebo in patients with Impaired Glucose Tolerance (IGT), based on the findings of the STOP-NIDDM trial, in the South Korean setting. **METHODS:** The CORE Diabetes Prevention Program, a peer-reviewed and published computer simulation model, was used to project long-term clinical and cost outcomes in type 2 diabetes patients receiving acarbose or placebo. Transition probabilities, risk adjustments, treatment effects and baseline cohort characteristics were based on the STOP-NIDDM trial. Direct costs were retrieved from an independent costing study conducted by IMS Health from a third party health care payer perspective in South Korea. Costs and clinical benefits were discounted at 5% per annum. Sensitivity analyses were performed. **RESULTS:** The results indicated that acarbose treatment was associated with improvements in discounted life expectancy (0.03 years) and decreased lifetime costs (South Korean Won 229,000 or €182 per patient) compared to placebo. Thus, acarbose was dominant (life and cost saving) to placebo. Furthermore, the proportion of patients that developed diabetes was 45.6% for acarbose and 53.8% for placebo and diabetes free survival was 4.31 and 4.12 years for acarbose and placebo, respectively. **CONCLUSION:** This study demonstrated that acarbose versus placebo was associated with improvements in life expectancy and a reduction in diabetes related costs, and is likely to represent excellent value for money in patients with IGT in the South Korean setting, from a third party health care payer perspective.

**PDB29**

## THE RELATIVE COST EFFECTIVENESS OF INSULIN GLARGINE VERSUS NPH INSULIN USING UK REAL LIFE DATA IN TYPE 1 DIABETES MELLITUS AND THE COMBINED EFFECT OF HBA1C AND HYPOGLYCAEMIA REDUCTION

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**OBJECTIVES:** This study sought to evaluate the cost utility of insulin glargine in the UK for people with Type 1 diabetes mellitus (T1DM) using observational data in patients switching from